

Dated

1 NOVEMBER

2007

- (1) Croda International plc
- (2) The Lubrizol Corporation

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Patent Deed of Assignment

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**THIS DEED** is made on 1 November 2007

**BETWEEN**

- (1) CRODA INTERNATIONAL PLC (registered number. 206132) whose registered office is at Cowick Hall, Snaith, Goole, East Yorkshire DN14 9AA (the "Assignor"); and
- (2) THE LUBRIZOL CORPORATION whose registered office is at 29400 Lakeland Boulevard, Wickliffe, Ohio 4092 (the "Assignee")

**BACKGROUND**

- (A) The Assignor is the proprietor of the patents and pending applications set out in **Schedule 1** (the "Patents").
- (B) The Assignor has agreed to assign of the Patents to the Assignee pursuant to a sale and purchase Agreement dated 1 September 2007 (the "SPA").

**OPERATIVE PROVISIONS**

**1. ASSIGNMENT**

The Assignor hereby assigns to the Assignee all the right, title and interest it has in the Patents, including all rights, privileges and advantages attaching or relating thereto (including the right to sue for past infringements and the right to retain any damages or other benefits as a result of such action).

**2. FURTHER ASSURANCE**

The Assignor agrees to execute, at the Assignee's expense, such further documents as may be reasonably requested by the Assignee to give full effect to the terms of this Agreement.

**3. CONTRACTS (RIGHTS OF THIRD PARTIES) ACT 1999**

The parties to this Deed do not intend that any of its terms will be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person not a party to it.

**4. GOVERNING LAW AND JURISDICTION**

The formation, existence, construction, performance, validity and all aspects whatsoever of this Deed or of any term of this Deed shall be governed by English Law. The English courts shall have exclusive jurisdiction to settle any disputes which may arise out of or in connection with this Deed. The parties agree to submit to that jurisdiction.

5. **SCHEDULE**

The Schedule forms part of this Deed and will have the same force and effect as if expressly set out in the body of this Deed and any reference to this Deed will include the Schedule.

This document is executed as a deed and delivered on the date stated at the beginning of this Deed.



**SCHEDULE 1**

Family No. : 34689

Descriptive Title : Ester lubricants for use with Arcton 134A in refrigerators etc.

Base Application Data : 8905795.4 14 Mar 1999 GB

**Abstract:**  
 A working fluid/lubricant combination for use in a mechanical vapour recompression type heat transfer device wherein the working fluid comprises a hydrofluorocarbon, hydrochlorofluorocarbon or chlorofluorocarbon and the lubricant comprises an ester having a molecular weight greater than 250.

Official Title : Working fluid/lubricant combination

Applicant / Patentee: Croda International Plc

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
United Kingdom	8905795.4 14 Mar 1989 89/0037 21 Mar 1989	2216541 A 11 Oct 1989	2216541	23 Oct 1991	14 Mar 2009
Bophuthatswana			89/0037	19 Sep 1991	Live - Granted
Venda	89/0032 22 Mar 1989		89/0032	28 Sep 1990	Live - Granted
South Africa	89/2140 21 Mar 1989	23 Sep 1989	89/2140	25 Jul 1990	22 Mar 2009
Transkei	89/0025 21 Mar 1989		89/0025	25 Apr 1991	21 Mar 2009

Family No. : 36610

Base Application Data : 9121657.2 11 Oct 1991 GB

Descriptive Title : R-22 replacement lubricants comprising neopentyl polyol esters or polyalkylene glycols

**Abstract:** A working fluid composition comprising: (A) a heat transfer fluid comprising a mixture of at least two hydrofluoroalkanes selected from the group consisting of difluoromethane, 1,1,1,2-tetrafluoroethane and pentafluoroethane; and (B) a sufficient amount of a lubricant to provide for lubrication of a compressor wherein the lubricant is at least partially soluble in each component of the heat transfer fluid and comprises one or more compounds of general formula:  $R(O - C - R')_n$

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Official Title : Working fluids

Applicant / Patentee: Croda International PLC

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
Italy [EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Live - Granted
New Zealand	244628 06 Oct 1992		244628 12 Sep 1995	06 Oct 2012	Live - Granted
Germany [EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	69232218.3-021 Nov 2001	30 Sep 2012	Live - Granted
Mexico	925809 09 Oct 1992	11 Apr 1993	207639 30 Apr 2002	09 Oct 2012	Live - Granted
Canada	2080278-2 09 Oct 1992	UNKNOWN	2080278 20 Apr 2004	09 Oct 2012	Live - Granted
Brazil	P19203942 09 Oct 1992		P19203942-1 05 Sep 2000	05 Sep 2015	Live - Granted
Australia	2 2931402 06 Oct 1992	781207 11 Apr 1993			Pending - Opposed
Norway	923943 09 Oct 1992		307793 29 May 2000	09 Oct 2012	Live - Granted
Uni.Kingdom[EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Live - Granted
Finland	924476 05 Oct 1992		110949 30 Apr 2003	05 Oct 2012	Live - Granted
Malaysia	P19201819 08 Oct 1992		MY-110213-A28 Feb 1998	28 Feb 2013	Live - Granted
Taiwan	81108448 23 Oct 1992		NI-69005 11 Apr 1995	23 Oct 2012	Live - Granted
Thailand	17090 09 Oct 1992	13938 20 May 1994			Live - Pending
United States	2 081976658 24 Nov 1997		6245254 12 Jun 2001	07 Oct 2012	Live - Granted
India	905/DEL/92 09 Oct 1992		185893 14 Dec 2001	09 Oct 2012	Live - Granted
Europe	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Granted - Opposed
Argentina	322617 10 Nov 1992		254442 30 Aug 2000	30 Aug 2015	Live - Granted
Philippines	45061 07 Oct 1992		1-1992-4506107 Oct 2005	07 Oct 2022	Live - Granted
Denmark [EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Live - Granted
France [EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Live - Granted
Korea (South)	18672/92 10 Oct 1992		250542 05 Jan 2000	10 Oct 2012	Live - Granted
Spain [EP]	92308922.1 30 Sep 1992	536940 A2 14 Apr 1993	0536940 21 Nov 2001	30 Sep 2012	Live - Granted
South Africa	9217690 06 Oct 1992	11 Apr 1993	9277690 29 Sep 1993	06 Oct 2012	Live - Granted
China	92113072.4 10 Oct 1992	UNKNOWN 02 Jun 1993	92113072.4 10 Oct 1998	10 Oct 2012	Live - Granted

**Family No. :** 50746      **Base Application Data :** 3901667.7    26 Jan 1999    GB  
**Descriptive Title :** Lubricant composition  
**Abstract:** A lubricant composition containing an anti-deposition component having an anti-deposition effect which is especially useful for the lubrication of refrigeration compressors and in reducing or removal of unwanted deposits in constricted areas in a refrigeration system.

**Official Title :** Refrigeration Lubricant Composition

**Applicant / Patentee:** Croda International Plc

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
US [PCT]	09/912316	26 Jan 2000	WO0044860	03 Aug 2000	Live - Granted
European [PCT]	00901219.6	26 Jan 2000	1151065	07 Nov 2001	Live - Pending

Family No. : 50864

Descriptive Title : A foaming lubricant composition and its use in refrigeration systems

**Abstract:** A lubricant composition has a synthetic lubricant base oil, preferably a polyol ester, and a polyether foam-inducing additive. The composition is suitable for use in a refrigerant system, particularly with HFC refrigerant gases. The foam-inducing additive is an alternative to known silicon-containing foam-inducing additives, which are not suitable for all refrigerant systems.

Official Title : Refrigerant Lubricant Composition comprising a foam-inducing additive

Applicant / Patentee: Croda International Plc

Base Application Data : 0001981.0 31 Jan 2000 GB

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
Taiwan	090101891 31 Jan 2001	55155 20 Feb 2003	1225515 21 Dec 2004	31 Jan 2021	Live - Granted
Thailand	063252 26 Jan 2001	WO0157165 09 Aug 2001	90405 31 Aug 2005	24 Jan 2021	Live - Pending
Singapore [PCT]	200204152-3 24 Jan 2001				Live - Granted
Malaysia	PI20010392 30 Jan 2001				Live - Pending
S Korea [PCT]	20027009794 24 Jan 2001	2002-08545 09 Aug 2001	675248 22 Jan 2007	24 Jan 2021	Live - Granted
Japan [PCT]	2001-557984 24 Jan 2001	2003-522254 09 Aug 2001	1252278 27 Sep 2006	24 Jan 2021	Live - Pending
Italy [EP]	01902469.4 24 Jan 2001	1252278 09 Aug 2001	1252278 27 Sep 2006	24 Jan 2021	Live - Granted
France [EP]	01902469.4 24 Jan 2001	1252278 09 Aug 2001	1252278 27 Sep 2006	24 Jan 2021	Live - Granted
Spain [EP]	01902469.4 24 Jan 2001	1252278 09 Aug 2001	1252278 27 Sep 2006	24 Jan 2021	Live - Granted
China [PCT]	01804343.7 24 Jan 2001	CN1396949A 09 Aug 2001	ZL01804343.13 Jul 2005	24 Jan 2021	Live - Granted

Family No.:

50949

Descriptive Title :

Mixed synthetic lubricants (alkylbenzenes/polyol esters) for use in refrigeration applications, esp. in fixed-vane rotary compressors

Abstract:

A lubricant composition for use in a rotary vane compressor has a base oil component that comprises an alkylbenzene as a major component thereof and a polyol ester as a minor component thereof. In particular, the base oil component comprises at least 55% by weight of alkylbenzene and at most 45% by weight of a polyol ester, more preferably between 55% and 75% by weight of alkylbenzene and between 45% and 25% by weight of polyol ester.

Official Title :

Refrigerator Lubricant Compositions

Applicant / Patentee:

Croda International Plc

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
US [PCT]	10/647531 27 Feb 2002	2004-0063590 12 Sep 2002	7176169 13 Feb 2007	27 Feb 2022	Live - Granted
Thailand	071997 27 Feb 2002				
S Korea [PCT]	2003-7011401 27 Feb 2002	2003-890048 12 Sep 2002			Live - Pending
Japan [PCT]	2002-570665 27 Feb 2002	2004-526832 12 Sep 2002			Live - Pending
India [PCT]	01245/DE1NP/227 27 Feb 2002	WO02/070637 12 Sep 2002			Live - Pending
European [PCT]	02701433.1 27 Feb 2002	1366139 12 Sep 2002			Live - Pending
China [PCT]	02805777.5 27 Feb 2002	WO02/070637 12 Sep 2002			Live - Pending
Brazil [PCT]	P10201575-0 27 Feb 2002	WO02/070637 12 Sep 2002			Live - Pending

Family No. : 51164

Descriptive Title : Use of phosphate esters as noise and vibration reducers in a lubricant composition in a compressor

Abstract: Use of a phosphate ester additive to reduce noise in and around a refrigerator compressor and a method for reducing noise in and around a refrigerator compressor by the addition of a phosphate ester additive to a refrigeration lubricant in the compressor. The phosphate ester additive reduces noise in and around the compressor with minimal foaming of the lubricant.

Official Title : Noise reducing additive

Applicant / Patentee: Croda International Plc

Country	Application Details	Publication Details	Grant Details	Expiry Date	Status
P.C.T.	GB2006/00064324 Feb 2006 AWAITED	WO2006/0925608 Sep 2006			Live - Pending
US [PCT]	US2006/00064324 Feb 2006 AWAITED	WO2006/0925608 Sep 2006			Pending - Searched
S Korea [PCT]		WO2006/0925608 Sep 2006			Pending - Searched
European [PCT]	06709875.6 AWAITED	WO2006/0925608 Sep 2006			Pending - Searched
China [PCT]	24 Feb 2006	WO2006/0925608 Sep 2006			Pending - Searched

**SIGNED AS A DEED** by )  
**Croda International plc** )  
acting by and ) **SEAN CHRISTIE (DIRECTOR)**  
a director and its secretary or two directors: ) **Louise Scott (Secretary)**

**Director**



**Director/Secretary**



**SIGNED** by )  
duly authorised for and on behalf of )  
**The Lubrizol Corporation** )  
in the presence of: )

Witness signature:

Name:

Address:

Occupation:

**SIGNED AS A DEED** by )  
**Croda International plc** )  
acting by and )  
a director and its secretary or two directors: )

**Director**

**Director/Secretary**

**SIGNED** by *S. F. Kirk* ) **S. F. KIRK**  
duly authorised for and on behalf of )  
**The Lubrizol Corporation** )  
in the presence of: *PEGGY WYSZYNSKI* )

Witness signature: *Peggy Wyszynski*

Name: *PEGGY WYSZYNSKI*

Address: *29400 LAKELAND BLVD., WICKLIFFE OH 44092*

Occupation: *LEGAL ASSISTANT*